BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

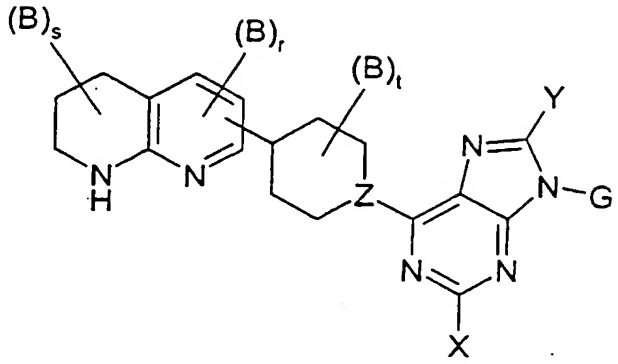
- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

Patent claims

1. A compound of the formula I,



I

in which

G is a residue of the formula II

$$-(CR^1R^2)_n-A-(CR^1R^2)_m-(CR^1R^3)_i-(CR^1R^2)_q-R^4 \qquad II$$

A is a direct bond, $-C(O)NR^5-$, $-NR^5C(O)-$, $-C(O)-$, $-NR^5-$, $-O-$, $-S-$, $-S(O)-$, $-S(O)_2-$, (C_2-C_4)-alkynediyl, (C_2-C_4)-alkenediyl, (C_5-C_{14})-arylene where in the arylene residue one, two, three, four or five ring carbon atoms can be replaced by heteroatoms from the series consisting of nitrogen, oxygen and sulfur, or a divalent residue of a 3-membered to 7-membered saturated or unsaturated ring which can contain one or two ring heteroatoms from the series consisting of nitrogen, sulfur and oxygen and which can be monosubstituted or disubstituted by residues from the series consisting of =O, =S and R^3;

B is (C_1-C_{18})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl-, fluorine, chlorine, bromine, hydroxy, cyano, trifluoromethyl, nitro, hydroxycarbonyl-, (C_1-C_6)-alkoxy, (C_1-C_6)-alkoxy-(C_1-C_6)-alkyl-, (C_1-C_6)-alkoxycarbonyl-, (C_1-C_6)-alkylcarbonyl-, (C_5-C_{14})-arylcarbonyl-, (C_1-C_6)-alkylaminocarbonyl-, (C_1-C_6)-alkoxy-(C_1-C_6)-alkoxy-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl-, (C_1-C_6)-alkanoylamino-, (C_1-C_6)-

alkylsulfonylamino-, (C_5-C_{14})-arylsulfonylamino-, (C_1-C_6)-alkylamino-, di-((C_1-C_6)-alkyl)amino-, (C_1-C_6)-alkylsulfonyl-, aminosulfonyl-, (C_5-C_{14})-arylsulfonyl-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylsulfonyl-, (C_5-C_{14})-aryl or (C_5-C_{14})-heteroaryl, where all residues B are independent of one another and can be identical or different;

X is hydrogen, $NR^6R^{6'}$, fluorine, chlorine, bromine, OR^6, SR^6, hydroxy-(C_1-C_6)-alkyl-NH-, (hydroxy-(C_1-C_6)-alkyl)$_2$N-, amino-(C_1-C_6)-alkyl-NH-, (amino-(C_1-C_6)-alkyl)$_2$N-, hydroxy-(C_1-C_6)-alkyl-O-, hydroxy-(C_1-C_6)-alkyl-S- or -NH-C(O)-R^6;

Y is R^6, fluorine, chlorine, bromine, cyano, $NR^6R^{6'}$, OR^6, SR^6 or hydroxy-(C_1-C_6)-alkyl-NH-;

Z is N or CH;

R^1 and R^2 are hydrogen, fluorine, chlorine, cyano, nitro, (C_1-C_{10})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl-, R^6-O-R^7, R^6-S(O)$_p$-R^7, $R^6S(O)_2NHR^7$, $R^6OC(O)NHR^7$ or $R^6R^{6'}N$-R^7, where all residues R^1 and R^2 are independent of one another and can be identical or different;

R^3 is hydrogen, fluorine, chlorine, cyano, nitro, (C_1-C_{18})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl-, R^6-O-R^7, $R^6R^{6'}N$-R^7, $R^6C(O)$-O-R^7, $R^6C(O)R^7$, $R^6OC(O)R^7$, $R^6N(R^{6'})C(O)OR^7$, $R^6S(O)_pN(R^5)R^7$, $R^6OC(O)N(R^5)R^7$, $R^6C(O)N(R^5)R^7$, $R^6N(R^{6'})C(O)N(R^5)R^7$, $R^6N(R^{6'})S(O)_pN(R^5)R^7$, $R^6S(O)_pR^7$, $R^6SC(O)N(R^5)R^7$, $R^6N(R^{6'})C(O)R^7$ or $R^6N(R^{6'})S(O)_pR^7$, where alkyl can be mono-unsaturated or poly-unsaturated and where alkyl, cycloalkyl, aryl, and heteroaryl can be monosubstituted or polysubstituted by R^6, fluorine, chlorine, bromine, cyano, trifluoromethyl, $R^6R^{6'}NR^7$, nitro, $R^6OC(O)R^7$, $R^6C(O)R^7$, $R^6N(R^{6'})C(O)R^7$, $R^6N(R^{6'})S(O)_pR^7$ or R^6-O-R^7, and where all residues R^3 are independent of one another and can be identical or different;

R^4 is $-C(O)R^8$, $-C(S)R^8$, $-S(O)_pR^8$, $-P(O)R^8R^{8'}$ or a residue of a 4-membered to 8-membered saturated or unsaturated heterocycle which contains 1, 2, 3 or 4 heteroatoms from the series consisting of nitrogen, oxygen and sulfur;

R^5 is hydrogen, (C_1-C_{10})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl or (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, where all residues R^5 are independent of one another and can be identical or different;

R^6 and $R^{6'}$ are hydrogen, (C_1-C_{18})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl or (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl- where aryl, heteroaryl, cycloalkyl and alkyl can be substituted one, two or three times by identical or different substituents from the series consisting of fluorine, chlorine, bromine, cyano, trifluoromethyl, nitro, hydroxycarbonyl-, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkoxy-(C_1-C_6)-alkyl-, (C_1-C_6)-alkoxycarbonyl-, (C_1-C_6)-alkylcarbonyl-, (C_1-C_6)-alkylaminocarbonyl-, (C_1-C_6)-alkoxy-(C_1-C_6)-alkoxy-, (C_5-C_{14})-arylcarbonyl-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl-, (C_1-C_6)-alkanoylamino-, (C_5-C_{14})-arylsulfonylamino-, (C_1-C_6)-alkylsulfonylamino-, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_1-C_6)-alkylsulfonyl-, (C_1-C_6)-alkylaminosulfonyl-, (C_5-C_{14})-arylaminosulfonyl-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylaminosulfonyl, (C_5-C_{14})-arylsulfonyl-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylsulfonyl, (C_5-C_{14})-aryl and (C_5-C_{14})-heteroaryl, and where all residues R^6 and $R^{6'}$ are independent of one another and can be identical or different;

R^7 is (C_1-C_4)-alkanediyl or a direct bond, where all residues R^7 are independent of one another and can be identical or different;

R^8 and $R^{8'}$ are hydroxy, (C_1-C_8)-alkoxy, (C_5-C_{14})-aryl-(C_1-C_8)-alkoxy-, (C_5-C_{14})-aryloxy, (C_1-C_8)-alkylcarbonyloxy-(C_1-C_4)-alkoxy-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylcarbonyloxy-(C_1-C_8)-alkoxy-, $NR^6R^{6'}$, (di-$((C_1-C_8)$-alkyl)amino)carbonylmethyloxy-, (di-$((C_5-C_{14})$-aryl-(C_1-C_8)-alkyl)-amino)carbonylmethyloxy-, (C_5-C_{14})-arylamino-, the residue of an amino acid, N-$((C_1-C_4)$-alkyl)-piperidin-4-yloxy-, 2-methylsulfonylethoxy-

, 1,3-thiazol-2-ylmethyloxy-, 3-pyridylmethyloxy-, 2-(di-($(C_1$-$C_4)$-alkyl)amino)-ethoxy or the residue Q^- $(CH_3)_3N^+$-CH_2-CH_2-O- in which Q^- is a physiologically tolerable anion, where all residues R^8 and $R^{8'}$ are independent of one another and can be identical or different;

n is zero, one, two, three, four or five;
m is zero, one, two, three, four or five;
i is zero or one;
q is zero, one or two;
r is zero, one or two;
s is zero, one, two or three;
t is zero, one, two, three, four, five, six, seven or eight;
p is zero, one or two, where all numbers p are independent of one another and can be identical or different;

in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs;

where, instead of the purine structure shown in formula I, also a 3-deazapurine structure, a 7-deazapurine structure or a 7-deaza-8-azapurine structure can be present.

2. A compound of the formula I as claimed in claim 1, in which

G is a residue of the formula II

$$-(CR^1R^2)_n-A-(CR^1R^2)_m-(CR^1R^3)_i-(CR^1R^2)_q-R^4 \qquad II$$

A is a direct bond, -C(O)NR^5-, -NR^5C(O)-, -C(O)-, -NR^5-, -O-, -S-, -S(O)-, -$S(O)_2$-, (C_2-C_4)-alkynediyl, (C_2-C_4)-alkenediyl, (C_5-C_{14})-arylene where in the arylene residue one, two, three, four or five ring carbon atoms can be replaced by heteroatoms from the series consisting of nitrogen, oxygen and sulfur, or a divalent residue of a 3-

membered to 7-membered saturated or unsaturated ring which can contain one or two ring heteroatoms from the series consisting of nitrogen, sulfur and oxygen and which can be monosubstituted or disubstituted by residues from the series consisting of =O, =S and R^3;

B is (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl-, fluorine, chlorine, bromine, hydroxy, cyano, trifluoromethyl, nitro, hydroxycarbonyl-, (C_1-C_6)-alkoxy, (C_1-C_6)-alkoxy-(C_1-C_6)-alkyl-, (C_1-C_6)-alkylcarbonyl-, (C_5-C_{14})-arylcarbonyl-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylcarbonyl- (C_1-C_6)-alkylaminocarbonyl-, (C_1-C_6)-alkanoylamino-, (C_1-C_6)-alkylsulfonylamino-, (C_5-C_{14})-arylsulfonylamino-, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_1-C_6)-alkylsulfonyl-, (C_5-C_{14})-arylsulfonyl-, (C_5-C_{14})-aryl-(C_1-C_8)-alkylsulfonyl-, (C_5-C_{14})-aryl or (C_5-C_{14})-heteroaryl, where all residues B are independent of one another and can be identical or different;

X is hydrogen, NH_2, -NH-C(O)-R^6 or OH;

Y is hydrogen;

Z is N;

R^1 and R^2 independently of one another are hydrogen, fluorine, chlorine, cyano, nitro, (C_1-C_{10})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl-, R^6-O-R^7, $R^6S(O)_2NHR^7$, $R^6OC(O)NHR^7$ or $R^6R^{6'}N$-R^7, where all residues R^1 and R^2 are independent of one another and can be identical or different;

R^3 is hydrogen, fluorine, chlorine, cyano, nitro, (C_1-C_{18})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl-, R^6-O-R^7, $R^6R^{6'}N$-R^7, $R^6C(O)$-O-R^7, $R^6C(O)R^7$, $R^6OC(O)R^7$, $R^6N(R^{6'})C(O)OR^7$, $R^6S(O)_pN(R^5)R^7$, $R^6OC(O)N(R^5)R^7$, $R^6C(O)N(R^5)R^7$, $R^6N(R^{6'})C(O)N(R^5)R^7$, $R^6N(R^{6'})S(O)_pN(R^5)R^7$, $R^6S(O)_pR^7$,

$R^6SC(O)N(R^5)R^7$, $R^6N(R^{6'})C(O)R^7$ or $R^6N(R^{6'})S(O)_pR^7$, where alkyl can be mono-unsaturated or poly-unsaturated and where alkyl, cycloalkyl, aryl and heteroaryl can be monosubstituted or polysubstituted by R^6, fluorine, chlorine, bromine, cyano, trifluoromethyl, $R^6R^{6'}NR^7$, nitro, $R^6OC(O)R^7$, $R^6C(O)R^7$, $R^6N(R^{6'})C(O)R^7$, $R^6N(R^{6'})S(O)_pR^7$ or R^6-O-R^7, and where all residues R^3 are independent of one another and can be identical or different;

R^4 is $-C(O)R^8$ or $-P(O)R^8R^{8'}$;

R^5 is hydrogen, (C_1-C_{10})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl- or (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, where all residues R^5 are independent of one another and can be identical or different;

R^6 and $R^{6'}$ are hydrogen, (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl or (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl- where aryl, heteroaryl, cycloalkyl and alkyl can be substituted one, two or three times by identical or different substituents from the series consisting of fluorine, chlorine, bromine, cyano, trifluoromethyl, nitro, hydroxycarbonyl-, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkoxy-(C_1-C_6)-alkyl-, (C_5-C_{14})-arylcarbonyl-, (C_5-C_{14})-aryl-(C_1-C_6)-alkylcarbonyl-, (C_1-C_6)-alkanoylamino-, (C_5-C_{14})-arylsulfonylamino-, (C_1-C_6)-alkylsulfonylamino-, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_1-C_6)-alkylsulfonyl-, (C_5-C_{14})-aryl and (C_5-C_{14})-heteroaryl, and where all residues R^6 and $R^{6'}$ are independent of one another and can be identical or different;

R^7 is (C_1-C_4)-alkanediyl or a direct bond, where all residues R^7 are independent of one another and can be identical or different;

R^8 and $R^{8'}$ are hydroxy, (C_1-C_8)-alkoxy, (C_5-C_{14})-aryl-(C_1-C_8)-alkoxy-, (C_1-C_8)-alkylcarbonyloxy-(C_1-C_4)-alkoxy- or $NR^6R^{6'}$ where all residues R^8 and $R^{8'}$ are independent of one another and can be identical or different;

n is zero, one, two, three, four or five;

m is zero, one, two, three, four or five;

i is zero or one;

q is zero, one or two;

r is zero, one or two;

s is zero, one, two or three;

t is zero, one, two, three, four, five, six, seven or eight;

p is zero, one or two, where all numbers p are independent of one another and can be identical or different;

in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs.

3. A compound of the formula I as claimed in claims 1 and/or 2, in which

G is a residue of the formula II

$$-(CR^1R^2)_n-A-(CR^1R^2)_m-(CR^1R^3)_i-(CR^1R^2)_q-R^4 \qquad II$$

A is a direct bond, $-C(O)NR^5-$, $-NR^5C(O)-$, $-C(O)-$, $-NR^5-$ or (C_5-C_{14})-arylene where in the arylene residue one or two ring carbon atoms can be replaced by heteroatoms from the series consisting of nitrogen, oxygen and sulfur;

B is (C_1-C_6)-alkyl, chlorine, hydroxy, cyano, trifluoromethyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylcarbonyl-, (C_1-C_6)-alkanoylamino-, (C_1-C_6)-alkylamino- or di-$((C_1-C_6)$-alkyl)amino-, where all residues B are independent of one another and can be identical or different;

X is hydrogen;

Y is hydrogen;

Z is N;

R^1 and R^2 are hydrogen, (C_1-C_4)-alkyl, $R^6S(O)_2NHR^7$ or $R^6OC(O)NHR^7$, where all residues R^1 and R^2 are independent of one another and can be identical or different;

R^3 is hydrogen, (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_6)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_6)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_6)-alkyl-, $R^6R^{6'}N-R^7$, $R^6S(O)_2N(R^5)R^7$, $R^6OC(O)N(R^5)R^7$ or $R^6C(O)N(R^5)R^7$, where alkyl can be mono-unsaturated or poly-unsaturated and where alkyl, cycloalkyl, aryl and heteroaryl can be monosubstituted or polysubstituted by R^6, fluorine, chlorine, trifluoromethyl, $R^6C(O)R^7$ or R^6-O-R^7;

R^4 is $-C(O)R^8$;

R^5 is hydrogen or (C_1-C_4)-alkyl, where all residues R^5 are independent of one another and can be identical or different;

R^6 and $R^{6'}$ are hydrogen, (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl or (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl- where aryl, heteroaryl, cycloalkyl and alkyl can be substituted one, two or three times by identical or different substituents from the series consisting of fluorine, chlorine, bromine, cyano, trifluoromethyl, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_5-C_{14})-aryl and (C_5-C_{14})-heteroaryl, and where all residues R^6 and $R^{6'}$ are independent of one another and can be identical or different;

R^7 is (C_1-C_2)-alkanediyl or a direct bond, where all residues R^7 are independent of one another and can be identical or different;

R^8 is hydroxy or (C_1-C_6)-alkoxy;

n is zero, one, two, three, four or five;

m is zero or one;

i is zero or one;

q is zero or one;

r is zero or one;

s is zero, one or two;

t is zero, one, two, three or four;

in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs.

4. A compound of the formula I as claimed in one or more of claims 1 to 3, in which

G is a residue of the formula II

$$-(CR^1R^2)_n-A-(CR^1R^2)_m-(CR^1R^3)_i-(CR^1R^2)_q-R^4 \qquad II$$

A is a direct bond;

B is (C_1-C_6)-alkyl or hydroxy, where all residues B are independent of one another and can be identical or different;

X is hydrogen;

Y is hydrogen;

Z is N;

R^1 and R^2 are hydrogen, (C_1-C_4)-alkyl, $R^6S(O)_2NHR^7$ or $R^6OC(O)NHR^7$, where all residues R^1 and R^2 are independent of one another and can be identical or different;

R^3 is hydrogen, (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_6)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_6)-alkyl-, (C_5-C_{14})-heteroaryl, (C_5-C_{14})-heteroaryl-(C_1-C_6)-alkyl-, $R^6R^{6'}N-R^7$, $R^6S(O)_2N(R^5)R^7$, $R^6OC(O)N(R^5)R^7$ or $R^6C(O)N(R^5)R^7$, where alkyl can be mono-unsaturated or poly-unsaturated and where alkyl, cycloalkyl, aryl and heteroaryl can be monosubstituted or polysubstituted by R^6, fluorine, chlorine, trifluoromethyl, $R^6C(O)R^7$ or R^6-O-R^7;

R^4 is $-C(O)R^8$;

R^5 is hydrogen or (C_1-C_4)-alkyl;

R^6 and $R^{6'}$ are hydrogen, (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl or (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl- where aryl, heteroaryl, cycloalkyl and alkyl can be substituted one, two or three times by identical or different substituents from the series consisting of fluorine, chlorine, bromine, cyano, trifluoromethyl, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_5-C_{14})-aryl and (C_5-C_{14})-heteroaryl, and where all residues R^6 and $R^{6'}$ are independent of one another and can be identical or different;

R^7 is a direct bond;

R^8 is hydroxy or (C_1-C_4)-alkoxy;

n is zero, one or two;
m is zero or one;
i is zero or one;
q is zero or one;
r is zero or one;
s is zero, one or two;
t is zero;

in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs.

5. A compound of the formula I as claimed in one or more of claims 1 to 4, which is a

G is a residue of the formula II

$$-(CR^1R^2)_n-A-(CR^1R^2)_m-(CR^1R^3)_i-(CR^1R^2)_q-R^4 \qquad II$$

A is a direct bond;

X is hydrogen;

Y is hydrogen;

Z is N;

R^1 and R^2 are hydrogen or (C_1-C_2)-alkyl, where all residues R^1 and R^2 are independent of one another and can be identical or different;

R^3 is $R^6R^{6'}N-R^7$, $R^6S(O)_2N(R^5)R^7$, $R^6OC(O)N(R^5)R^7$ or $R^6C(O)N(R^5)R^7$;

R^4 is $-C(O)R^8$;

R^5 is hydrogen or (C_1-C_2)-alkyl;

R^6 and $R^{6'}$ are hydrogen, (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl or (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl- where aryl, heteroaryl, cycloalkyl and alkyl can be substituted one, two or three times by identical or different substituents from the series consisting of fluorine, chlorine, bromine, cyano, trifluoromethyl, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_5-C_{14})-aryl and $(C_5-$

C_{14})-heteroaryl, and where the residues R^6 and $R^{6'}$ are independent of one another and can be identical or different;

R^7 is a direct bond;

R^8 is hydroxy or (C_1-C_4)-alkoxy;

n is zero, one or two;
m is zero or one;
i is zero or one;
q is zero or one;
r is zero;
s is zero;
t is zero;

in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs

6. A compound of the formula I as claimed in one or more of claims 1 to 5, which is a

G is a residue of the formula II

$$-(CR^1R^2)_n-A-(CR^1R^2)_m-(CR^1R^3)_i-(CR^1R^2)_q-R^4 \qquad II$$

A is a direct bond;

X is hydrogen;

Y is hydrogen;

Z is N;

R^1 and R^2 are hydrogen;

R^3 is $R^6S(O)_2N(R^5)R^7$ or $R^6OC(O)N(R^5)R^7$;

R^4 is $-C(O)R^8$;

R^5 is hydrogen;

R^6 is (C_1-C_{12})-alkyl, (C_3-C_{14})-cycloalkyl, (C_3-C_{14})-cycloalkyl-(C_1-C_8)-alkyl-, (C_5-C_{14})-aryl, (C_5-C_{14})-aryl-(C_1-C_8)-alkyl-, (C_5-C_{14})-heteroaryl or (C_5-C_{14})-heteroaryl-(C_1-C_8)-alkyl- where aryl, heteroaryl, cycloalkyl and alkyl can be substituted one, two or three times by identical or different substituents from the series consisting of fluorine, chlorine, bromine, cyano, trifluoromethyl, (C_1-C_6)-alkyl, (C_1-C_6)-alkoxy, (C_1-C_6)-alkylamino-, di-$((C_1-C_6)$-alkyl)amino-, (C_5-C_{14})-aryl and (C_5-C_{14})-heteroaryl;

R^7 is a direct bond;

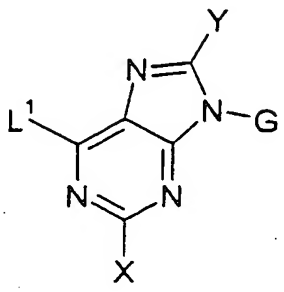
R^8 is hydroxy or (C_1-C_4)-alkoxy;

n is one;
m is zero;
i is one;
q is zero;
r is zero;
s is zero;
t is zero;

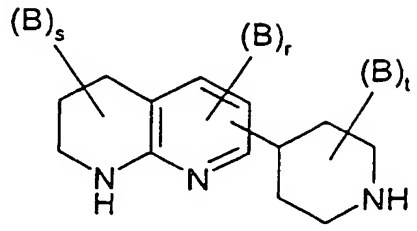
in all their stereoisomeric forms and mixtures thereof in all ratios, and their physiologically tolerable salts and their prodrugs

7. A process for the preparation of a compound as claimed in one or more of claims 1 to 6, comprising reacting a compound of the formula VI with a compound of the

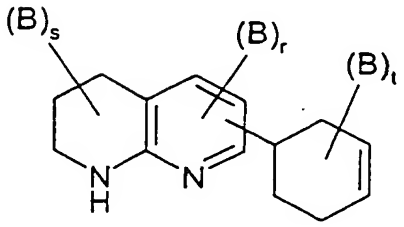
formula VIIa or with a compound of the formula VIIb



VI



VIIa



VIIb

wherein L^1 is a leaving group and B, G, X, Y, r, s and t are defined as in claims 1 to 6 but wherein functional groups can also be present in the form of precursor groups or in protected form.

8. A pharmaceutical composition, comprising at least one compound of the formula I as claimed in one or more of claims 1 to 6 and/or its physiologically tolerable salts and/or its prodrugs and a pharmaceutically acceptable carrier.

9. A compound of the formula I as claimed in one or more of claims 1 to 6 and/or its physiologically tolerable salts and/or its prodrugs for use as a vitronectin receptor antagonist.

10. A compound of the formula I as claimed in one or more of claims 1 to 6 and/or its physiologically tolerable salts and/or its prodrugs for use as an inhibitor of bone resorption, for the therapy or prophylaxis of osteoporosis, as an inhibitor of tumor growth or tumor metastasis, as an antiinflammatory, or for the therapy or prophylaxis of cardiovascular disorders, restenoses, arteriosclerosis, nephropathies, retinopathies, psoriasis or rheumatoid arthritis.